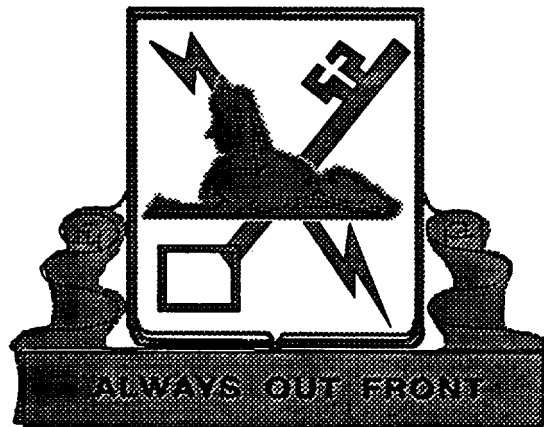


**U.S. Army Intelligence Center**

**Directorate of Combat Developments  
Concepts Division**

# **Intelligence and Electronic Warfare (IEW) System Fact Sheets**



**6 April 1994**

**Fort Huachuca, Arizona**

**Unclassified**

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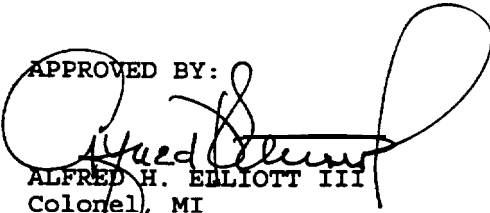
**Directorate of Combat Developments**

**Intelligence and Electronic Warfare (IEW)  
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## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES:

- Multiple sensors:
  - Magnetic
  - Seismic/acoustic
  - Infrared
- Flexible:
  - Field programmable
  - Durable
- Reliable:
  - Low false alarm rate/high nuisance rejection
  - Tamper-proof
  - Sensor status rpts
- Built in EP:
  - Jam resistant
  - LPI
- Long life
- Simple to emplace

#### PHYSICAL PARAMETERS

- Sensors
  - 11"L x 2"H x 5.7"W
  - 3.5-4.0 lbs
- Monitor
  - 12"H x 4"W x 3"D
  - 5.0 lbs
- Repeater
  - 11"L x 3"H x 4.4"W
  - 6.0 lbs

#### PERFORMANCE AND CHARACTERISTICS:

- Detection range:
  - Personnel 3-50m
  - Wheeled 15-250m
  - Tracked 25-350m



## Improved Remotely Monitored Battlefield Sensor System (IREMBASS)

I-REMBASS is an unattended ground sensor system that detects, classifies, and determines direction of movement of intruding personnel and vehicles. It uses remotely monitored sensors emplaced along likely enemy avenues of approach. These sensors respond to seismic-acoustic energy, infrared energy, and magnetic field changes to detect enemy activities. The sensors process the data and provide detection or classification information which is incorporated into digital messages and transmitted through short burst **transmission** to the system sensor monitor programmer set. The messages are demodulated, decoded, displayed, and recorded to provide a time-phased record of enemy activity.

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## SYSTEM SUMMARY

### FEATURES

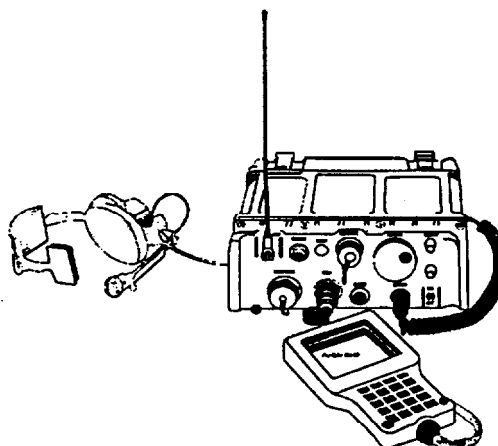
- Search: Manual or auto
- Intercept: HF/VHF/UHF
- Locate:
  - Determines/reports LOB data to other LMRDFS or Teammate systems
  - Graphically displays LOB data
  - Receives/processes LOB data from other LMRDFS
- Communications:
  - Receives/generates taskings; reports results
  - Transmits/receives secure data

### MAJOR COMPONENTS SIZE/WEIGHT

- Receiver/processor
  - 12"x12.8"x5" (stowed)
  - 24 lbs
- VHF/UHF antenna
  - 14"x6"x28" (stowed)
  - 27 lbs
- HF Antenna
  - 13" long (stowed)
  - 9 lbs

### PERFORMANCE AND CHARACTERISTICS:

- Power:
  - BA-4386/U (Magnesium)
  - BA-5598/U (Lithium)
  - BE-586/U (Nicad)



## Lightweight Man-Transportable Radio Direction Finding System (LMRDFS) AN/PRD-12

The AN/PRD-12 is a lightweight manportable communications intercept/DF system. The system's dual channel design gives it speed, high accuracy, and operational flexibility. It can stand alone on intercept and direction-finding missions. On emitter location missions, it works as part of a network that may include larger systems, such as Teammate, AN/TRQ-32A(V)2. The system is ideal for intercept/DF operations in light, airborne, air assault and SOF operations. The 60 pound system can be carried by two soldiers. The receiver/processor subsystem fits in one soldier's ALICE pack and the antenna subsystem goes in another pack. A complete station can be rapidly relocated, optimizing its use in the forward areas of operations. External communications are provided by secure Combat Net Radio (CNR).

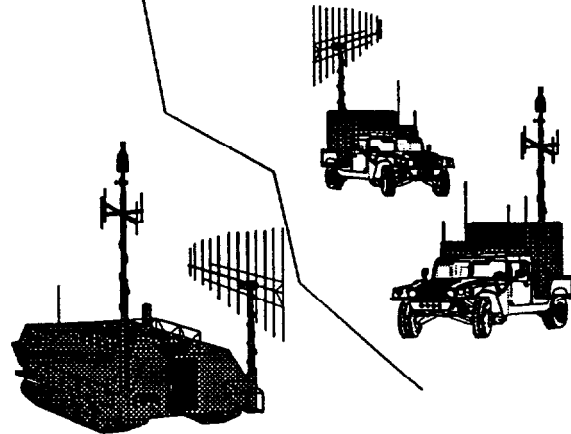
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#### SYSTEM SUMMARY

- Precision (targetable) emitter locations
- Quickfire channel through ACE or CGS to shooters
- Instantaneous signal acquisition, targeting processing, reporting
- COMINT/ELINT correlation for node ID
- Smart "Stealth" jamming
  - reduces jamming interference
  - optimizes effects of jamming on the threat
- Operates against modern modulations and LPI signals
- Expanded frequency range over current systems:
  - COMINT: MF to SHF
  - ELINT: UHF to EHF
- Commonality simplifies logistics and trng:
  - Mission equipment
  - Standard Army vehicles
- Open sys arch. for ease of upgrade & horizontal technology insertion
- Interoperable with USA & USMC:
  - Intel fusion systems
  - Fire Spt (wpns/ctrs)
  - Unlike IEW assets

#### BASIS OF ISSUE:

- 6 per MI BN (BVY, LT, ABN, AASLT, DIV)
- 6 per MI Co; ACR



## Ground Based Common Sensor (GBCS)

GBCS is the Army's only on-the-ground, all-weather, all-terrain, self-contained, fully integrated, 24-hour signal intelligence and electronic warfare asset. The Electronic Attack (EA) module includes smart jamming capabilities. GBSC-H, mounted in the M1097 (EFVS), provides the capability to conduct mission operations on-the-move. The GBSC-L, mounted on the M1001 (HMMWV, heavy), provides light forces with a rapidly deployable ground based SIGINT capability. Using common subsystems in the platform, the system intercepts and jams both single channel and LPI signals and when netted with AQF, provides situation development and targeting information to battlefield commanders. The GBSC preprocesses signal data at the sensor and provides target detection, identification, and location reports in near-real-time. The GBSC is organic to MI units at division and ACR. System collection and precision location results provide input for tasking and mission direction for other divisional IEW assets\ The GBSC-H/L is an element of the IEW Common Sensor (IEWCS) system.

### System Summary

- Precision (targetable) emitter locations
- Quickfire channel through ACE or CGS
- Instantaneous signal acquisition, targeting processing, reporting
- COMINT/ELINT correlation for node ID
- Smart "Stealth" Jamming
  - Reduces jamming interference
  - Optimizes effects of jamming on the threat
- Operates against modern modulations and LPI signals
- Expanded freq range:
  - COMINT: MF to SHF
  - ELINT: UHF to EHF
- Commonality simplifies logistics & trng:
  - Mission equipment
  - Std Army airframe
- Extended Mission Duration
- Open sys arch. - ease of upgrade & horiz. technology insertion
- Integrated navigation guidance system
  - Provides 10m accuracy on AQF locations
  - Inertial Navigation Guidance System
  - Miniture Global Positioning Receiver (MAGR)

#### BASIS OF ISSUE:

- 4 per MI BN (RVY, LT, ABN, AASLT DIV)
- 4 per MI Co, ACR

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## Advanced QUICKFIX (AQF)

AQF is a division level sensor system that provides signals intelligence to the battlefield commander at ranges in excess of the Ground Based Common Sensor capability. The system modularity allows for tailored mission tasking for communications and non-communications intelligence collection, precision location, and Electronic Attack (EA). The system will permit rapid mid-range emitter mapping of the battlefield by using angle and time difference of arrival technology. Its range and accuracy supports the targeting of command and control nodes within the division battle space. The AQF operates in single or multiple aircraft missions. It interoperates with the GBCS-H/L, and other AQF assets, as part of the Intelligence and Electronic Warfare Common Sensor (IEWCS) system, in a network to obtain targetable emitter locations. Each system provides the capability to detect, locate, collect, analyze, and exploit fixed frequency and LPI communications. AQF provides a "smart jamming" capability against communications emitters.

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### SYSTEM SUMMARY

#### FEATURES:

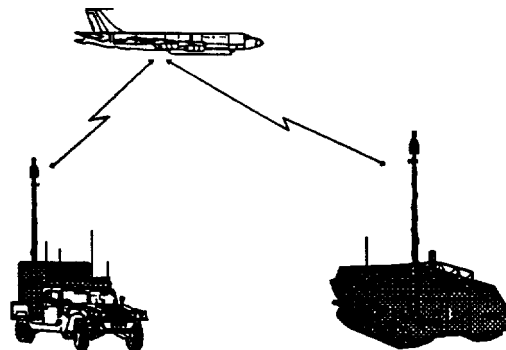
- Situation development
- Battle management
- Targeting
- Force protection
- Limited BDA

#### PHYSICAL PARAMETERS

- 3 variants
  - (L) 2xMMWV & shelter
  - (M) 2x5-Ton, shelter & 30Kw
  - (H) MIRS chassis w/ armored enclosure

#### PERFORMANCE AND CHARACTERISTICS:

- Receipt & Analysis of JSTARS data:
  - Wide area surveil.
    - MTI
  - Small area surveil
    - Sector search
    - Target class
    - Attack planning
    - Attack support
    - Target tracking
  - Syn Aperture Radar
    - 4Km x 4Km SAR
    - Fixed tgt indicator
  - Receives UAV data
    - MGSM-hard wire
    - LGSM/HGSM-RVT
  - LGSM/HGSM-w/CTT rcv's:
    - Guardrail
    - TIBS & TRAP
- Interoperability:
  - TACFIRE/AFATDS
  - ASAS
  - Standard comms
- Operations:
  - Display/manipulate multi-sensor data
  - Remote display
  - Interactive data link
  - Color hardcopy
  - Men history replay
  - Graphics, masking, map, track display



### JSTARS Ground Station Module . (GSM BLK I)

JSTARS is a joint Army-Air Force wide-area-surveillance system that provides battle management and targeting information. It supports situation development and targeting of mobile and fixed ground targets and slow moving rotary wing aircraft. JSTARS consists of Air Force E8C aircraft and Army GSMs. The E8C collects MTI and SAR radar data using a multi-mode radar. The GSM is the Army's highly mobile ground station. It receives and analyzes processed radar imagery from the E8C. It is also capable of receiving/analyzing data from UAV-SR and SIGINT from the CTT. The GSM is distributed at all echelons brigade and above. It supports intelligence and targeting functions with NRT interactive displays, which can be reproduced on a remote display. The operator provides accurate fixed and moving target locations, speed and direction of movement, and classification of tracked/wheeled vehicles. The GSM is equipped with standard Army communications and dedicated TACFIRE and ASAS digital links using pre-formatted auto-fill message formats. The SCDL provides a wideband, anti-jam, two way link between the E8C and the GSM. Radar data, flight operations information and RSR status, come from the aircraft. RSRs requesting special radar products (see performance characteristics), etc. are sent from the GSM to the aircraft. The GSM and E8C are also linked by SINCGARS and UHF radios.

#### Basis of Issue:

- 6 per DIV MI BN
- 2 per EAC MI BDE, Corps MI BDE, & USAIC&FH
- 1 per Corps Arty/Arty BDE/AVN BDE
- 1 per ACR/SEP BD

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## SYSTEM SUMMARY

### FEATURES:

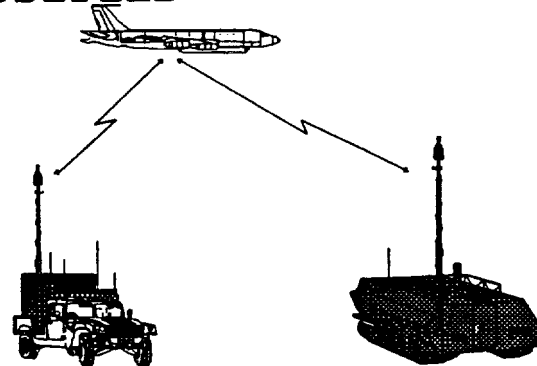
- Status-at-a-glance
- Situation development
- Battle management
- Targeting
- Force protection
- Limited BDA

### PHYSICAL PARAMETERS

- 3 variants
  - (L) 2xHMMWV & shelter
  - (M) 2x5-Ton, shelter & 30KW
  - (H) Bradley chassis w/ armored enclosure

### PERFORMANCE AND CHARACTERISTICS:

- Receipt & Analysis of JSTARS data:
  - Wide area surveil.
    - MTI
  - Small area surveil.
    - Sector search
    - Target class
    - Attack planning
    - Attack support
    - Target tracking
  - Syn Aperture Radar
    - 4Km x 4Km SAR
    - Fixed tgt indicator
  - Receives UAV data
    - MGSM-hard wire
    - LGSM/HGSM-RVT
  - Receives National SIDS
  - LGSM/HGSM-w/CTT rcv's:
    - Guardrail
    - TIBS & TRAP
- Interoperability:
  - TACTIRE/AFATDS
  - ASAS
  - Standard comms
- Operations:
  - Display/Manipulate multi-sensor data
  - Remote display
  - Interactive data link
  - Color hardcopy
  - Msn history replay
  - Graphics, masking, map, track display



## JSTARS Common Ground Station (CGS/GSM BLK II)

JSTARS GSM BLK II (CGS) is a product improvement of the GSM BLK I. It includes all GSM BLK I baseline functionality in the same three mobility and survivability configurations: heavy, medium, and light. It incorporates additional mission functionality into a fully mobile targeting, battle management, and surveillance system. It receives, correlates, manipulates, displays, stores, and disseminates imagery to include secondary imagery from national and theater sensors. The CGS operates at the SECRET collateral level. It interfaces with ATCCS and B2C2 to provide tactical commanders and battle staffs at ECB a status-at-a-glance of the battlefield. CGS operations on the move are supported by a robust suite of communications devices that include SATCOM, IHFR, and CTT. The system facilitates intelligence operations and battle command through the use of wargaming, IPB, asset management, and other tactical IEW and targeting working aids. It provides the force with a fully scalable, tailorable, mobile, and responsive intelligence data processing capability to satisfy operational and tactical requirements. The system's open architecture allows performance improvements and physical downsizing through insertion of evolving communications and computer technology.

### Basis of Issue:

- 6 per DIV MI BN
- 2 per EAC MI BDE, Corps  
MI BDE, & USAIC&FH
- 1 per Corps Arty/Arty  
BDE/AVN BDE
- 1 per ACR/SEP BD

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### System Summary

#### Characteristics

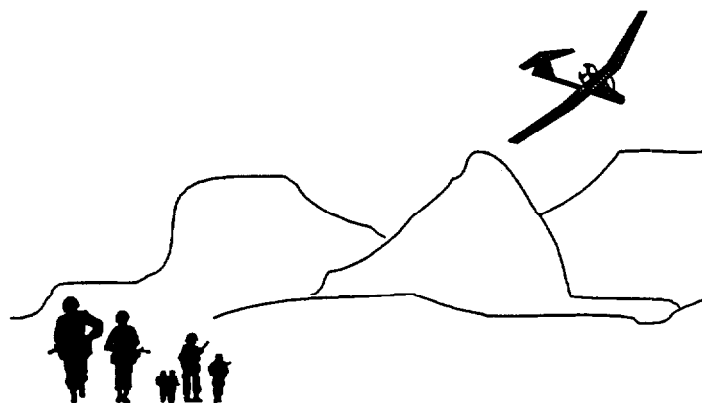
- Backpack-size components
  - aircraft (25 lbs)
  - ground station (40 lbs)
- Assembly time:
  - aircraft - 2.5 min
  - ground station - 4 min
- Ground Control Station:
  - 2 shrouded, 4", color monitors (data display)
  - 8 mm video cassette (replay with freeze frame, fast and slow motion, stereo audio channels)
  - 2 video and 2 audio channels
- Aircraft Dimensions:
  - 9' wingspan
  - 6' length
  - 8 lbs

#### Performance

- Hand launched
- 1 hr flight duration
- Airspeed 22-45 mph
- Patrol radius 3.3 miles
- Climb rate 600 ft/min
- Nominal low alt. 100 ft
- Auto-land by deep stall

#### Capabilities

- Combat missions
  - Recon/surveillance
  - Target identification
  - Convoy route support
  - BDA
  - Camouflage assessment
- Peacekeeping missions
  - Counter drug
  - Law Enforcement
  - Land management
  - Environmental survey



## Pointer

Hand Launched  
Unmanned Aerial Vehicle

The Pointer is a Hand-Launched Unmanned Aerial Vehicle (HL-UAV) to be employed by battalion scouts for "over-the-hill" reconnaissance and surveillance. It is transportable by 2 soldiers in full mission gear and can be set-up and launched in 5 minutes or less. The system has daytime and twilight operation. capabilities and improves the survivability of scout teams. Its mission capabilities traverse the full range of military operations and include such areas as drug enforcement, search and rescue, and natural disaster damage assessment. In its current configuration each HL-UAV team consists of three soldiers; a pilot, a navigator, and a spotter. The system does not require a special nor dedicated vehicle.

## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES:

##### Payloads:

- EO/FLIR

##### Potential payloads:

- MTI/SAR
- MET
- Electronic Support
- Electronic Attack
- Mine detection
- NBC recon

#### PHYSICAL PARAMETERS

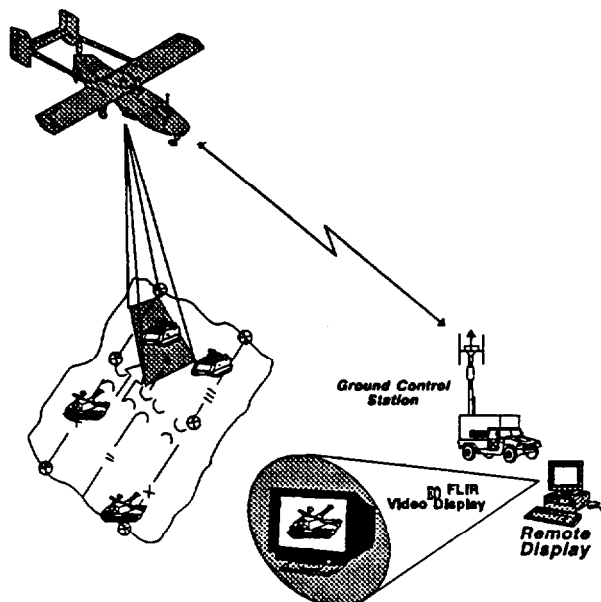
- Payload: 50 lbs

#### PERFORMANCE AND CHARACTERISTICS:

- Range: 50 km
- Endurance: 3 hrs
- Climb rate:  
750' per min
- Operational Alt:  
5,000' AGL
- Launch/recover  
w/ cross winds up  
to 20 kts
- Capable of min  
speed of 75 kts
- Launch/recovery area:  
- 30m x 75m with a  
10m obstacle
- Deployability:  
- C130 or larger  
- Roll-on/roll-off

#### BASIS OF ISSUE:

- 3 per Hvy/Air Aslt  
division
- 5 per light  
division
- 3 per Abn division
- 3 per ACR
- 5 per light ACR
- 1 per separate Bde
- Total requirement: 74



## Unmanned Aerial Vehicle Close Range (UAV-CR)

The UAV-CR will be organic to MI battalions in each type of division, ACR, and separate brigade. The vehicle operates forward of the FLOT, day or night, in limited adverse weather conditions to provide commanders with near-real-time intelligence, reconnaissance, and battlefield surveillance. It has a 50 km radius and a flight endurance of 3 hours. The baseline fielding configuration consisting of: four air vehicles, four EO/FLIR payloads, two ground control stations, two ground data terminals, and one remote video terminal. Additional payloads may include MTI, meteorological sensors, SAR, communications and noncommunications intercept and DF, and jamming payloads for communications and noncommunications.

## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES:

##### Fielded payloads:

- EO/FLIR
- UAV data relay

##### Potential payloads:

- MTI
- Comms relay
- SAR
- MET
- Electronic Support
- Electronic Attack
- Mine detection
- PSYOP
- SIGINT
- NBC recon

#### PHYSICAL PARAMETERS

- Wing span: 29.2'
- Payload: 200 lbs
- Engines: 2 x 65 HP
- Fuel: MOGAS

#### PERFORMANCE AND CHARACTERISTICS:

- Range: 300 km
- Endurance: 10 hrs
- Climb rate: 1050' per min
- Operating Alt: 5000' AGL
- Service ceiling: 15000' MSL

##### Speed:

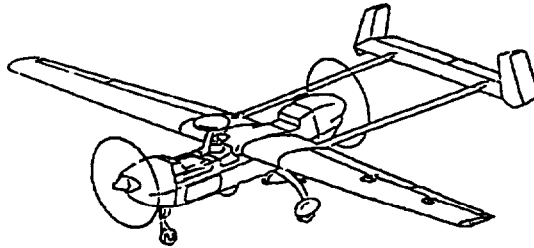
- Cruise: 90 kts
- Dash: 110 kts

##### Launch/recovery area:

- 200m x 75m

#### BASIS OF ISSUE:

- 1 per Hvy/Air Aslt div
- 2 per EAC & corps
- 1 per Abn div & ACR(B)
- Total requirement: 24



## Unmanned Aerial Vehicle Short Range (UAV-SR)

The UAV-SR system will be organic to the Aerial Exploitation Battalions of the corps MI brigade, EAC MI brigades, MI battalions in each heavy division, and the ACR. The vehicle operates throughout the battlefield area, forward of the FLOT, day or night, in limited adverse weather conditions to provide commanders with near-real-time intelligence, target acquisition, battle damage assessment, reconnaissance, and battlefield surveillance. The radius of operation is 300 km from the controlling ground control station, with a flight endurance of 10 hours. Baseline fielding configurations consisting of: eight air vehicles, eight dual EO/FLIR payloads, four data relay payloads, two ground control stations, two ground data terminals, a mission planning station, four remote video terminals, a launch and recovery section, and a mobile maintenance facility. Additional payloads being considered for development include MTI, meteorological sensors, SAR, minefield detectors, communications relay, communications and noncommunications intercept, DF, and jammers.

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### SYSTEM SUMMARY

#### FEATURES:

- Payloads:
  - EO/FLIR
  - MTI/SAR
  - SIGINT
  - Comm/data relay
  - MET
  - PSYOP
  - NBC recon

#### PHYSICAL PARAMETERS

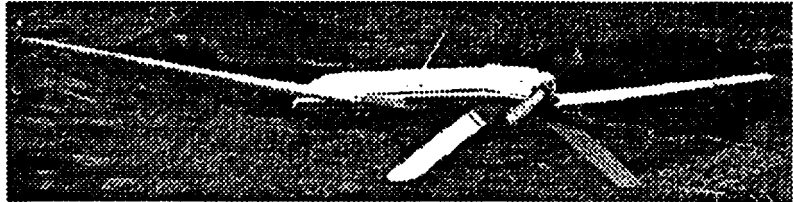
- Payload: 500+ lbs

#### PERFORMANCE AND CHARACTERISTICS:

- Range: 1200+ km
- Endurance: 24+ hrs
- Climb rate:
  - 750' per min
- Operational Alt:
  - 40,000'+ AGL
- Loiter speed: 50 kts
- Dash speed: 100+ kts
- Launch/recover
  - w/ cross winds up to 20 kts
- Launch/recovery area:
  - 51,000' runway or less
- Deployability:
  - C130 or larger
  - Roll-on/roll-off

#### BASIS OF ISSUE:

- 2 per EAC MI Bde
- 2 per corps MI Bde



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## Tactical Endurance Unmanned Aerial Vehicle (TE-UAV)

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The TE-UAV will be organic to the Aerial Exploitation Battalion of the Corps MI Brigade and the EAC MI Brigade. It will operate as a stand-off system behind friendly lines and also penetrate deeply into enemy territory for selected missions. The TE-UAV will operate night and day, in near-all-weather conditions, for extended periods of time. Its radius of operation can be up to 1200 km from the controlling GCS, using either a UAV or satellite relay, with an endurance of more than 24 hours on-station. A baseline consists of 8 AV, all payloads, 2 GCS/GDT and 1 LCS/LRT (if unique from UAV-SR), and all necessary support equipment. Payloads will include EO/FLIR, MET, MTI/SAR, SIGINT, NBC Recon, PSYOPS, and comm/data relay.

## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES:

##### Components:

- 12 x RC-12 aircraft
- 4 x IPF vans
- 3 x IDL trackers
- CTT

##### Sensors:

- Advanced QUICKLOOK  
ELINT coll & DF
- COMINT coll & DF
- Comms High Accuracy  
Airborne Location  
System

##### Flexibility:

- Remote relay  
capability
- Scalable system  
for rapid deployment
- Aircraft is self  
deployable

#### PERFORMANCE AND CHARACTERISTICS:

- Mission altitude:  
20,000-30,000 ft
- Stand-off 50-75 km
- Endurance:  
5.5 Hrs
- Data link range:  
150 mi LOS
- LOS coverage 450 km  
from aircraft
- Reports via CTT

##### Targets:

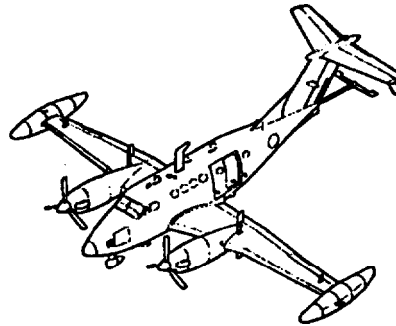
- Communications  
emitters
- Jammers
- Noncomms emitters

##### Products:

- Tgt data (50m CEP)
- Intell reports

##### BASIS OF ISSUE:

- 1 sys per III, V, &  
XVIII Abn corps, and  
501st MI Bde (Korea)  
(4 total)



## Guardrail Common Sensor (GRCS)

GRCS collects selected low, mid, and high-band radio signals, identifies and classifies them, determines the locations of their sources, and provides near-real-time reporting to tactical commanders in the field. The system uses an integrated processing facility (IPF) which is the control, data processing, and message center for the overall system. up to three airborne relay facilities (ARF)/aircraft, intercept communications and noncommunications emitter transmissions and gather LOB, and TDOA data. They then transmit these data to the IPF. The ARF/aircraft also serve as relay platforms for communications between the IPF and the supported commands. This system incorporates the Communication High Accuracy Airborne Location System (CHAALS) to achieve precision target locations for its COMINT system. Targeting accuracy is also provided by the ELINT system. Ground to ground (including CTT) communications links provide the primary interface with fixed locations and tactical users. Automated addressing to CTT field terminals provides automated message distribution to tactical commanders in near real time. Planned improvements include expanded COMINT/ELINT collection, LPI capability, embedded training, CTT (3 channel) retrofit, automated reporting and automated PROFORMA.

## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES:

##### Components:

- Behavilland Dash 7
- Grd processing station
- ACT 101 remote rcv sets
- TACLINK video rcv sets
- FLIR system
- Daylight imaging sys
- Infrared line scanner
- Radio intercept/DF sys

##### Flexibility:

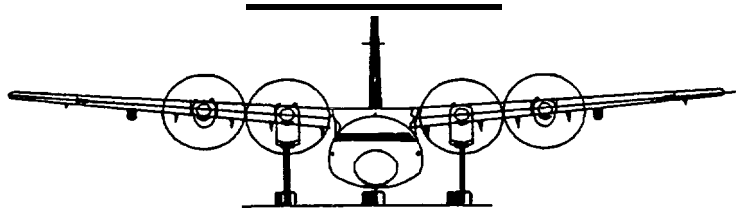
- Spts full range of military operations
- Arrives ready for immediate employment
- Joint service capable
- Interop w/ ASAS and CTF
- Low profile collection system
- Small logistics tail
- Multiple sensor system

#### PHYSICAL CHARACTERISTICS:

- Wing span: 93'
- Length: 81'
- Take off max gross wt: 47,000 lbs
- Mission payload: 2500 lbs
- Crew: 7 (incl. 2 pilots)

#### PERFORMANCE:

- Service ceiling: 25,000' MSL
- Endurance: 8 hrs
- Range: 1500 NM
- Cruise speed: 230 Kts
- Fully IFR certified
- Short take-off/landing capable



## ARL

### Airborne Reconnaissance Low

ARL is a medium range airborne reconnaissance and surveillance system with COMINT, direction finding, and electro-optic collection capabilities. ARL is deployed to SOUTHCOM in response to CINCSOUTH reconnaissance and surveillance requirements. The initial fielding in FY93 required two separate aircraft configurations, one for COMINT (HF, VHF, UHF) intercept and Direction Finding and one for IMINT. On-board operators enable ARL to self deploy, perform immediate analysis and real-time imagery dissemination via secure comms, and operate with minimal logistical support. The system arrives at the deployment location ready for immediate employment. In FY96 the Multi-function ARL (APL-M) will combine COMINT/DF and imagery capabilities onto one aircraft. A total of 9 aircraft will be fielded by FY98. Upgrading of the aircraft engines to the T-800 series is under consideration to improve performance. An open system architecture allows integration of additional capabilities. Options currently include an MTI/SAR sensor, low light television, multi-spectral cameras, a remote COMINT relay, and special radio equipment intercept capabilities. The ARL-M system will be self deployable and is near self sustainable (except POL) for 7 to 10 days.

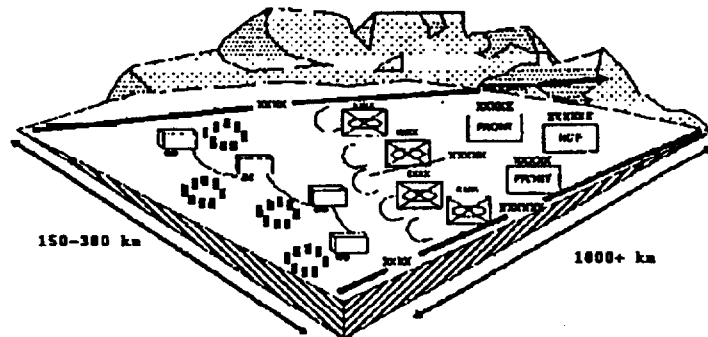
## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES:

- Targets HF:
  - Jammers
  - Emitters
- Products:
  - COMINT
  - Technical rpts
- Preplanned product improvement:
  - NVIS capability
  - LPI capability
- Supports EAC commanders
- Capable of long distance comms w/ organic resources
- DF stations can operate independently or in netted configurations

### HF INTERCEPT AND DF



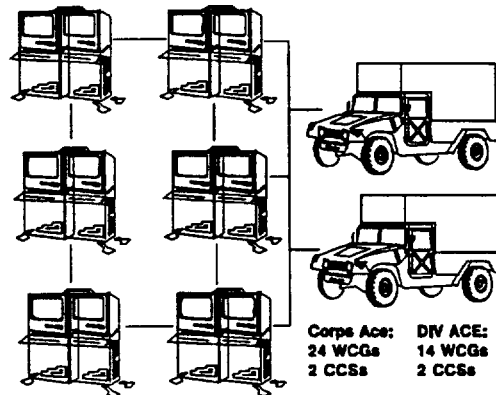
## Enhanced TRACKWOLF

The Enhanced TRACKWOLF, AN/TSQ-152(V), is a follow-on to the QRC TRACKWOLF, AN/TSQ 152, system. The Enhanced TRACKWOLF system is an EAC high frequency (HF) skywave communications intelligence (COMINT) collection and direction finding system used to support the theater commander. It consists of two independent but interactive subsystems -- a Collection and Processing Subsystem (CPS), and a Direction Finding Subsystem (DFS). The DF stations may operate independently or in any netted configuration. The Enhanced TRACKWOLF's modularity and rapid deployability enable it to be reconfigured to accomplish COMINT missions across the operational continuum. Communications are provided by a variety of embedded systems, as well as secure voice and data access to the ACUS.

UNCLASSIFIED

### SYSTEM SUMMARY

- All source fusion
  - Hosts JDISS software
  - Integrates collection mgmt functionality
  - IEW tech ctrl sys for ATCCS
  - Common ATCCS HW/SW
  - Processes collateral & SCI
  - Multi-level security
  - Auto msg sanitization
  - Interface w/Army BFAs, joint, natn'l & allied IEW systems
  - Rapidly processes large msg volumes:
    - Auto parse 24 msg types
    - Auto gen. 16 msg types
  - Immediate HVT/HPT alarming & reporting
  - Auto self-correlation & interactive node analysis
  - Spts jump, degraded, & split-based ops
  - Comms via UHF, VHF, IJFR, CTT, SATCOM, MSE, TRI-TAC, AUTODIN, & DSNET 3
  - Digital terrain/wx prod.
  - SID display
  - Direct data exchanges w/ joint and national data bases
- BASIS OF ISSUE:**
- 1 per EAC, corps, div, sep bde, ACR



## All Source Analysis System (ASAS)

ASAS is a modular, tactically deployable, computer-assisted IEW processing, analysis, reporting and technical control system. It provides automated intelligence and information management, to include interface data handling. These features couple IEW sensors, pre-processors, the ASAS and the Force Level Control System (FLCS) to meet time and accuracy requirements for decision support and C2W planning and execution. It consists of evolutionary sets of hardware and software modules that perform system operations management and security; communications processing and interfacing; input message processing; intelligence processing and reporting; target identification and nomination; and intelligence collection management. The ASAS collateral enclave subsystem provides automated intelligence support to the G2 Plans and Operations staff elements and also operates as the technical control portion of the IEW C2 node of ATCCS. It provides current IEW and enemy situation information to the FLCS data base for access and use by commanders and other ATCCS/FLCS users.

## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES:

##### Components:

- Field Terminals
- Processor Signal Data
- Radio rcvr/xmtr (RRT)
- Antenna array
- Radio relay system
- Security data sys
- Embedded COMSEC

##### Flexability:

- Quick erect antenna
- Mobile operations
- Mountable in:
  - fixed/rotary AC
  - track/wheeled veh
  - shelters

#### PHYSICAL PARAMETERS

- Mounts in Full Air Transportable Rack

#### PERFORMANCE AND CHARACTERISTICS:

##### Receive:

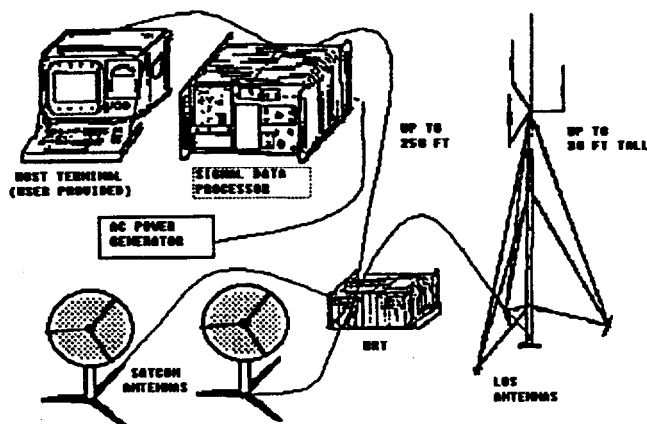
- SECRET & SCI level
- NRT data & voice
- Secondary imagery capable
- 300 Msg/hr (IPF)
- 3 channels of TADIXS/TRAP/TIBS simultaneously
- Text base (BIT & character msgs)
- Selective address up to 100 field addresses

##### In TRIKS net:

- Built-in EP function
- 4 duplex voice
- Full duplex digital data

##### BASIS OF ISSUE:

- Deployed to AVN, ADA, FA & MI @ all echelons
- Total: 300-400 systems for the Army



## CTT-H

Commander's Tactical Terminal/Hybrid  
(AN/USC-55)

An anti-jam, readily transportable COMINT/ELINT tasking and reporting transmitter/receiver designed for near-real-time dissemination of intelligence. The CTT-H provides simultaneous full-duplex (FDX) data and half-duplex (HDX) voice communications between ground processing facilities (GPF) and tactical field units in TRIKS net. The CTT-H also provides the commander access to theater and national assets through 2 additional nets; TIBS and TRAP/TADIXS broadcast. It can provide either one transmit/receive and two receive only channels or three receive only channels. The GPFs are the CARS (AF) and the GRCS IPF (Army). The CTT-H provides the capability for selected Army and Air Force airborne collection systems to forward, on a dedicated basis, perishable intelligence to deep, close, and rear operations weapon systems, aviation assets, air defense artillery, and intelligence centers at all echelons.

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## SYSTEM SUMMARY

### PERFORMANCE AND CHARACTERISTICS

Transmit and receive:

- 14 channels digital voice, data, FAX, and video
- Operates in "C", "Ku", or "X" Bands
- LAN for workstations
- Secondary imagery capability
- Intelligence dissemination capability
- Back-up comms:
  - DSVT (MSE)
  - UHF TACSAT (AN/PSC-5)
  - INMARSAT-M Terminal
  - CTT-H/R (Host)
- 4.8 to 512 Kbps
- Variable rate switching
- GPS

### FEATURES

Components:

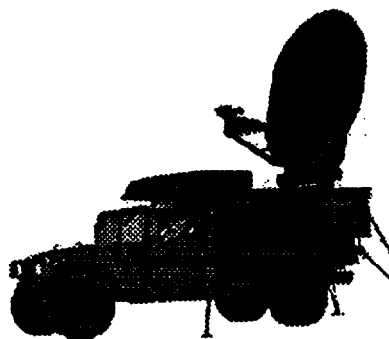
- 2-SI/TK operator positions (Warrior 2.0)
- 1-collateral position
- 14 channels
  - 4 collateral
  - 10 SI/TK
- Wire and fiber optics connections
- Tunnel-mounted generators

Flexibility:

- Quick erect, satellite auto-tracking antenna
- Mobile opns in HMMWV
  - Maint/spares shelter
  - Mission equip shelter
  - Trailer mounted ant
- Back-up communications
- Airborne/heliborne certified

### PHYSICAL PARAMETERS

- Mounts on 2 heavy variant HMMWVs
- Tactical SATCOM trailer
- Under-the-hood power generation subsystem



## TROJAN SPIRIT II

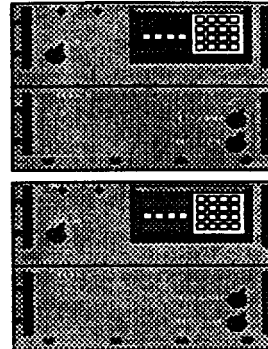
AN/TSQ-190 (V)

An intelligence dissemination satellite terminal which provides access for intelligence processing and dissemination systems. This system consists of secure voice, data, facsimile, video and secondary imagery dissemination capabilities. The system will receive, display, and transmit digital imagery, weather and terrain products, templates, graphics and text between CONUS/OCONUS bases and deployed forces. Connectivity is provided through the Fort Belvoir TROJAN switching center which currently connects TROJAN systems at various US bases with front-end antenna arrays located worldwide. The TROJAN SPIRIT II combines this network with mobile switch extensions to offer a worldwide, forward-deployed, quick-reaction reporting and analysis link. The terminal can provide up to 14 circuits (10 SCI/4 collateral) using variable baud rates from 4.8 to 512 kbps per channel and will operate on either C, Ku, or X frequency bands. Validated requirements for the SPIRIT II System include DSNET I/III, MSE, and Tactical Packet Network (TPN) interfaces, as well as LAN connectivity. It is intended to augment EAC and ECB in-theater communications. It will conduct split-based, inter- and intra-theater operations through the range of military operations.

### System Summary

- Designed for use with TENCAP programs
- Simultaneous comms capability when stacked
  - 2 transmit channels
  - 6 receive channels
- SATCOM, point-to-point, TADIXS-B, and direct data downlinks
- Full duplex, half duplex, simplex:  
voice and data
- Embedded Tactical Receive Equipment (TRE) processor
- 10 data I/O ports
- Compatible with ARC-164, ARC-171, WSC-3, PSC-3, & IST-5
- Built-in test with automatic reconfiguration
- KG-34, KG-84 and TADIXS-B encryption compatible
- Variable baud rates (2.4 -19.2 kbps per channel)
- 32 MB processor parses messages and automatically outputs reports
- TIRS receive capability will be added in FY 94
- On-going efforts to be DAMA-compliant (Demand Assigned Multiple Access) in FY 96

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## SUCCESS

### UHF Radio Subsystem (Synthetic UHF Computer-Controlled Equipment Subsystem)

The SUCCESS UHF radio is a fully automated microprocessor-based computer-controlled UHF-band radio. Data may be transmitted and received simultaneously over its one transmit and three receive channels. Two SUCCESS radios may be stacked to provide an integrated, fully redundant, two transmit and six receive channel capability. The radio is designed to communicate with selected airborne, terrestrial, and satellite systems. It contains a tactical receive equipment (TRE) processor and can process all TRAP/TADIXS-B formatted transmissions. The control/receiver and transmitter drawers are designed for ground/mobile sheltered environments.

## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES

##### Robust Communications:

- AUTODIN/DSSCS (R/Y)
- TROJAN, STU III, MSE
- UHF SATCOM
- S-BAND SATCOM
- UHF PT-to-PT terrestrial
- Landlines
- S-Band w/ ROTERM/CHARIOT

##### Timely SIGINT/IMINT:

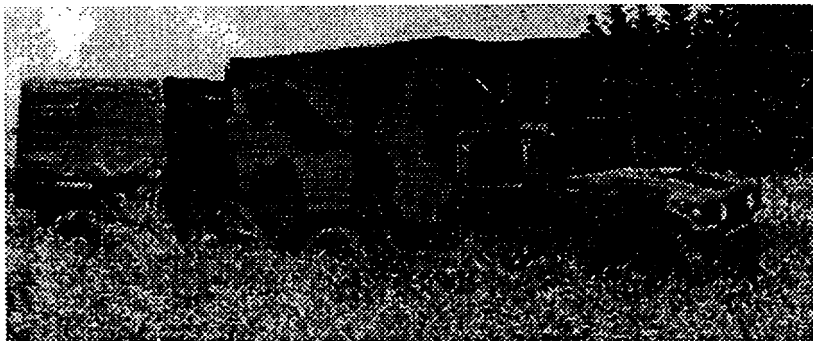
- National/Theater /Tactical sensors
- Immediate reporting by discipline
- Integrates SIGINT/IMINT
- Receives, annotates, and disseminates secondary imagery

#### PHYSICAL PARAMETERS

- Consists of one shelter-mounted heavy duty HMMWV, 1 cargo HMMWV, and 1 gen. trailer
- Subsystems:
  - 2 remotable analyst work stations
  - Communications
  - Support subsystems
    - + Power
    - + Environmental
    - + Mobility/transport
- Roll-on/Roll-off C130
- Airliftable by CH-47
- Set-up/tear-down  $\leq$  1 hr

#### PERFORMANCE AND CHARACTERISTICS

- Employed at division and corps ACE
- Robust communications
- Timely SIGINT/IMINT
- Split-based operations
- Targeting support
- Target development
- Situation development



Mobile Integrated Tactical Terminal  
(MITT)

The MITT is the downsized version of the THMT with a SUN UNIX architecture and will replace the THMT in the force structure. The MITT is a division, corps, and EAC level, mobile, air and ground transportable system capable of providing multiple-source SIGINT and IMINT to Army tactical forces. It provides timely integrated intelligence products in response to the tactical commander's requirements. It receives, annotates, and transmits secondary imagery. It can also receive, process, and disseminate SIGINT data, and maintain a correlated data base. The MITT has the SUCCESS radio which provides stand-alone secure communications capable of receiving TRAP/TADIXS-B, as well as transmitting and receiving via UHF SATCOM, and point-to-point terrestrial communications. The DIA accredited CSP is compatible with TROJAN, MSE, DIN/DSSCS as well as all TENCAP systems. A TIBS (RIVET JOINT) capability will be added in FY94. Other communications listed in the system summary.

## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES:

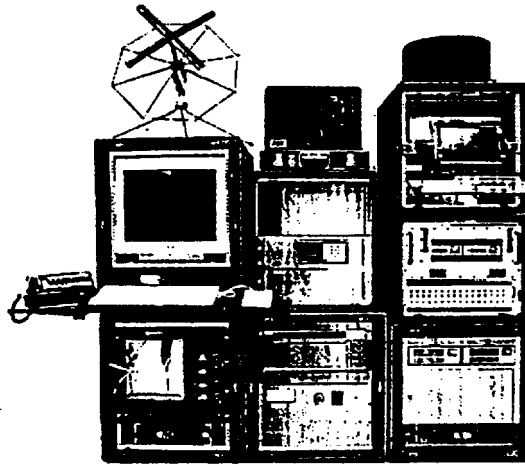
- Robust Communications:
  - AUTODIN/DSSCS (R/Y)
  - TROJAN, STU III, MSE
  - UHF SATCOM
  - UHF pt-to-pt terrestrial
  - Landlines
  - S-band w/ ROTERM/CHARIOT
- Timely SIGINT/IMINT:
  - National/theater /tactical sensors
  - Immediate reporting by discipline
  - Integrates SIGINT/IMINT
  - Receives, annotates, and disseminates secondary imagery

#### PHYSICAL PARAMETERS

- Two work stations:
  - Main:
    - six unit, VME based processor
    - 7 transport cases
    - 1050 lbs auxillary (forward deployed WS)
  - Briefcase size UNIX processor
  - 2 transport cases
  - 212 lbs
- Subsystems:
  - 1 remotable analyst... workstation
  - Communications
  - Power supply

#### PERFORMANCE AND CHARACTERISTICS:

- Employed at div (ACE)
- Robust communications
- Timely SIGINT/IMINT
- Split-based operations
- Targeting support
- Target development
- Situation development



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### Forward Area Support Terminal **FAST**

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The **FAST** is an intelligence data processing system for the divisions, separate brigades, and ACRs. It is a smaller version of the MITT, operating at the collateral level. It is a transportable, modular, survivable, stand-alone, UNIX based multi-tasking intelligence support system and is capable of receiving secondary imagery. The system consists of seven modularized and downsized components allowing for easy transport and mounting on a variety of vehicles and aircraft. The FAST has SUCCESS radio which provides stand-alone secure communications, capable of receiving TRAP/TADIX-B, as well as transmitting and receiving via UHF SATCOM, and point-to-point terrestrial communications. The FAST CSP is compatible with TROJAN, MSE, DIN/DSSCS as well as all TENCAP systems. A TIBS capability is being added to the system.

## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES

##### Near-Real-Time IMINT:

- Exploitation
- Receipt
- Exploitation Management
- Reporting
- Secondary Imagery Dissemination
- Archive of imagery and reports

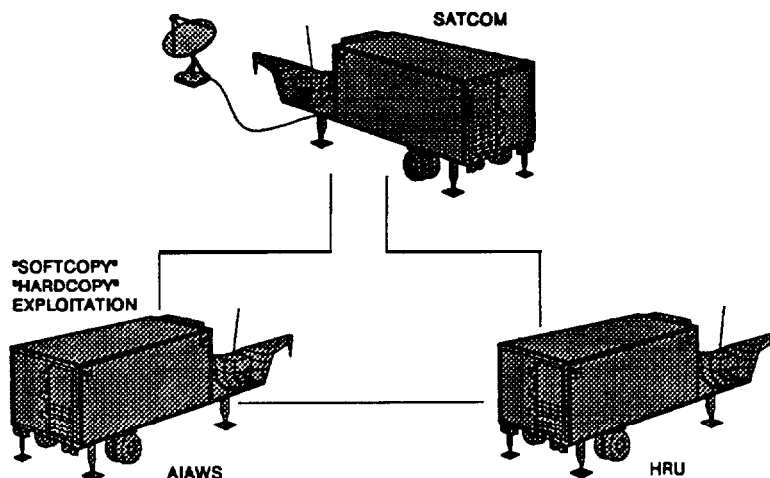
#### PHYSICAL PARAMETERS

- 40' Hardcopy/Softcopy exploitation van
- 35' SATCOM Van
- 35' Receive Location Van
- A quick reaction antenna
- Air deployable C-141, C-5

#### PERFORMANCE AND CHARACTERISTICS

##### Provides:

- Precise identification and location
- Exploitation management
- Secondary Imagery Dissemination



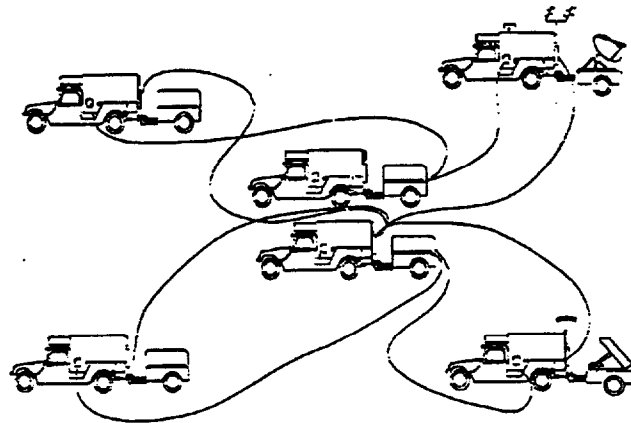
## Modernized Imagery Exploitation system (MIES)

The MIES provides the capability to receive and exploit digital imagery in near-real-time (NRT). It provides exploitation management, reporting, secondary imagery dissemination, limited archives of imagery, and reports. It is used to support all imagery operational areas, intelligence development for indications and warning, situation assessment, order of battle, targeting, and tactical operations. There are two systems in the TENCAP inventory, one located at FT Bragg with XVIII ABC, the second at Augsburg Germany with the 66th MI Brigade. A third system will be fielded in FY96 to the 513th MI Bde at Fort Gordon.

### System Summary

- Consists of three imagery processing elements:
  - Electro-optical
  - Infrared
  - SAR
- Replaces MIES and IPDS
- Flat panel antenna technology
- Prototype SAR processor uses current ETRAC processor scheduled for fielding to XVIII ABC in FY96
- System supports:
  - 8 exploitation wk stns
  - 1 RMS station wk stn
  - 1 supervisor wk stn
- SID file server supports networks via:
  - Point-to-point
  - Terrestrial
  - Satellite
  - UHF broadcast
  - DSNET 1/3
- Supports T1 data rate
- Transmits SID products using NITFS format
- Creates and transmits graphic situation display products
- RORO on C130
- Engineering development model will be fielded to XVIII ABC in 1999

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## MIRS

### Miniaturized Imagery Receive System

MIRS is the next generation, down-sized imagery receive system for deployment at **corps**, EAC, and selected Army S&T, R&D, and training centers. It will be procured as a COTS/GOTS system to replace the Army National Imagery Systems, IES and IPDS. Conceptually, the MIRS consists of three imagery processing elements; **electro-optical**, infrared, and SAR. The system contains multiple imagery exploitation elements capable of remoted operation with automated target recognition (ATR). It also contains a requirements and dissemination management element and a communications element. The system incorporates a secondary imagery file server capable of supporting multiple imagery dissemination networks. The system is also capable of creating and transmitting graphic situation display products.

## System Summary

### Features:

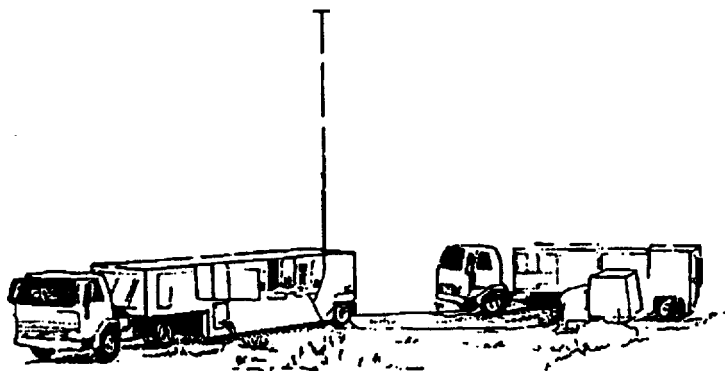
- Near-real-time IMINT
- Receipt
- Exploitation
- Dissemination
- Supports Cdr at:
  - EAC
  - Corps
  - Division
  - Maneuver brigade
  - SOF

### Physical Parameters:

- Multiple operations shelters
- Air deployable via: C130, C141, C5

### Performance and Characteristics:

- Near-real-time IMINT to the Cdr
- Precise Positioning



## Enhanced Tactical Radar Correlator (ETRAC)

ETRAC is an advanced development mobile synthetic aperture radar (SAR) processor. It receives direct down-linked radar phase history data, collected by the ASAR-2 SAR system on board the U2R aircraft. The ETRAC converts the radar phase history data into imagery, which is passed to either the IPDS or MIES for subsequent exploitation and dissemination of imagery products to consumers. The ETRAC has a limited organic exploitation capability for stand-alone operations. The ETRAC communications equipment includes the SUCCESS radio, TENCAP communications system processor, STU-III and digital subscriber voice terminal, providing a robust communications capability. It will be fielded to the 18th Airborne Corps.

## SYSTEM SUMMARY

### FEATURES:

- Robust communications:
  - AUTODIN/DSSCS (R/Y)
  - TROJAN, STU-III, MSE
  - UHF SATCOM
  - UHF pt-pt terrestrial
  - Landlines
  - S-band comms via ROTERM/CHARIOT
- Timely SIGINT/IMINT:
  - National/theater /tactical sensors
  - Immediate reporting
  - Integrates SIGINT/IMINT, rpts results
  - Cross cues SIGINT/IMINT processors
  - Receives, annotates, and disseminates secondary imagery

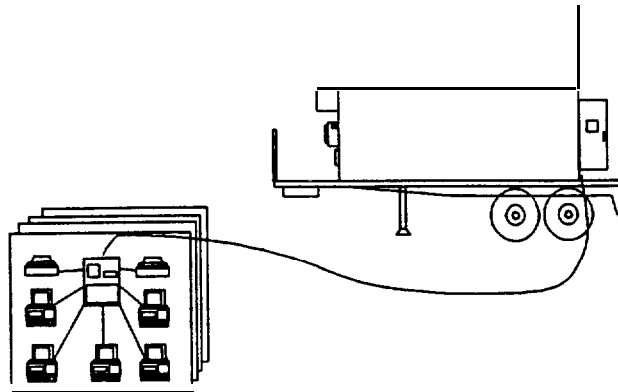
### PHYSICAL PARAMETERS:

- 20' van w/ 5T tractor
- Subsystems:
  - IMINT/ESP/ELINT pos
  - Remote CMST terminal
  - Comms processor
- Air deployable on C130
- Set-up/tear-down <1 hr

### PERFORMANCE AND CHARACTERISTICS:

- Employed at corps ACE and selected EAC
- Robust communications
- Timely SIGINT/IMINT
- Split-based opns
- Spts tgt development
- Situation development
- Collection management

UNCLASSIFIED



## ETUT

### Enhanced Tactical Users Terminal

The ETUT is a mobile, air and ground transportable, system-high, intelligence and communication system. The system is designed as the interface between the EPDS for SIGINT data, the IPDS for imagery data, and provides an automated collection management capability to the tactical commander. Communications consists of a SUCCESS radio which provides simultaneous connectivity through/to multiple airborne/spaceborne platforms as well as the TRAP/TADIX-B interface. The DIA accredited communication subsystem is compatible with TROJAN, MSE, Top Graphic/Gallant/Gable, as well as all TENCAP systems. The ELINT tactical position maintains a data base which is a reflection of the data manipulated in the EPDS. The imagery management position interfaces with a variety of corps, theater, and national imagery systems to provide soft copy manipulatable imagery, as well as a data base of exploited imagery reports. The collection management support tool's position is remotable in order to provide the collection manager access to the Army baseline collection management system.

## UNCLASSIFIED

### SYSTEM SUMMARY

#### FEATURES:

##### Robust Communications:

- AUTODIN/DSSCS (R/Y)
- TROJAN
- STU-III
- MSE
- UHF SATCOM
- S-BAND SATCOM
- UHF PT-to-PT terrestrial
- Landlines (leased or dedicated)

##### Near-Real-Time SIGINT:

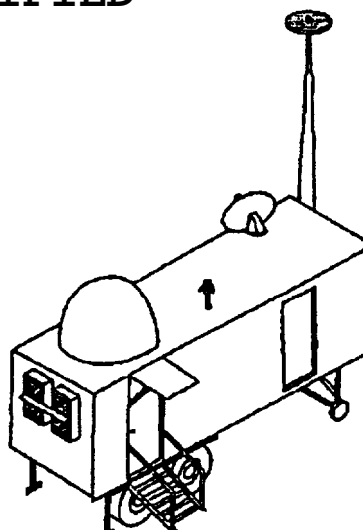
- National/theater /tactical sensors
- Receives, pre-processes
- Correlates & integrates
- Reports refined results

#### PHYSICAL PARAMETERS:

- Consists of a 30' van pulled by a three axle 10-ton tractor
- Subsystems:
  - 2 analyst positions
  - Data acquisition
  - Comms processor
- Air deployable on C130 or larger aircraft
- Set-up/tear-down <2 hr

#### PERFORMANCE AND CHARACTERISTICS:

- Employed at corps (rear) and select EAC
- Robust communications
- Near-real-time SIGINT
- Split-based opns
- Spt situation dev
- Target development support (close - deep)
- Timely recognition and warning of WARM



### EPDS

Electronic Processing and  
Dissemination System

EPDS is a mobile, air and ground transportable, system-high, intelligence and communication system. The system receives and processes SIGINT data collected by national, theater, and corps sensors. SIGINT data is correlated and integrated, then forwarded to the tactical commander in response to priority intelligence requirements and requests for information. The EPDS maintains the tactical commander's SIGINT data base and serves as a pre-processor for the ETUT/THMT/MIIT/FAST. The Communications Systems Processor (CSP) consists of a SUCCESS radio which provides **uplink** and **downlink** communications with multiple airborne/spaceborne platforms simultaneously, and external ports to enable communication **compatibility** with TROJAN, MSE, DIN/DSSCS as well as other **TENCAP** systems. The SUCCESS additionally provides a TRAP/TADIX-B interface. The data acquisition system provides direct access to national sensors, as well as, a full-duplex S-band SATCOM capability. A TIBS capability will be added in FY 94.

UNCLASSIFIED

### System Summary

- Automatic meteorological sensor system capable of measuring:
  - wind speed (up to 70 knots,  $\pm 2$ )
  - wind direction (0-360°,  $\pm 5$ )
  - ambient temperature (-40°C to +50°C,  $\pm 1$ )
  - ground surface temp (-10°C to +50°C,  $\pm 1$ )
  - relative humidity (0-100%,  $\pm 5$ )
  - barometric pressure (600-1080 millibars,  $\pm 1$ )
  - liquid precipitation rate (+2mm per hour)
  - liquid precipitation accumulation, continuously measured (+2.5 mm)
  - illumination (100,000 to 0.0001 lux  $\pm 10\%$  actual illum.)
  - soil moisture, 6-inch depth (0-100%,  $\pm 5$ )

### System components:

- Sensor/Transceiver Unit (STU):
  - senses, stores, averages and reports weather data
  - stand alone or vehicle mounted
- Programmer/Monitor Unit (PMU):
  - programs or changes weather reporting intervals and critical threshold values
  - transmits location, elevation, date and time, & STU tilt status
- Interface Unit (IU):
  - provides internal interface between the STU, PMU, and IMETS using available area communications



## Automatic Meteorological Sensor System (AMSS)

The AMSS is a fully-automatic meteorological sensor system capable of measuring wind speed, wind direction, ambient temperature, relative humidity, and barometric pressure in forward areas of the battlefield. AMSS can be mounted on tactical vehicles or hand-emplaced in remote areas. The system is man-portable, automatic, remotely operated, and uses either standard internal battery or external power sources. The AMSS supports fast-paced, flexible AirLand Operations and gives critical surface weather data to support maneuver and targeting requirements. The AMSS assigned to the maneuver force provides local weather data to the brigade/battalion S2, plus provides weather support to the division IMETS. The sensor/transceiver unit (STU) automatically senses, stores, averages, and reports weather data at its location at operator-programmed intervals, when interrogated by the programmer/monitor unit (PMU), or when operator-programmed critical thresholds are met. An interface unit links the system to the weather processor using available area communications.

AMSS. WPD  
29 Mar 94

## UNCLASSIFIED

### SYSTEM SUMMARY

#### FUNCTIONS:

- Receives weather data from:
  - Satellites
  - Local & remote sensors
  - Arty meteorology
  - Theater forecast units
  - AF Global Weather Central
- Process and displays:
  - Weather satellite imagery
  - Upper air data
  - Surface reports
  - Manual and automated weather forecasts
  - Tactical decision aids (TDA)
- Disseminates forecasts and TDAs to all users
- Independent opns using HF and satellite comms

#### PHYSICAL PARAMETERS

- Std Integrated Cmd Post Shelter (SICPS)
- Hvy HMMWV mounted
- Std 10kw generator



### Integrated Meteorological system (IMETS)

The Integrated Meteorological System is an automated, mobile, tactical, weather data, receiving, processing and dissemination system. It provides timely weather and environmental effects forecasts, observations, and decision aid information to the tactical commander. IMETS is operated by Air Force weather teams and maintained by Army technicians. The system provides 24 hour automated weather support to commanders at all echelons; EAC, corps, division, separate brigades, ACRs, SOF, aviation brigades and other task organized contingency forces. IMETS provides automated weather data to support Air Defense, Fire Support, Intelligence and Electronic Warfare, Maneuver Control System and Combat Service Support battlefield functional areas.

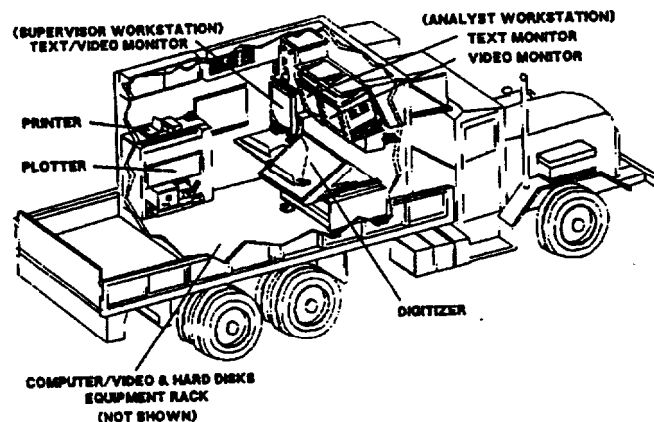
### System Summary

- Automates terrain teams
- Create, (re)format, update, store, retrieve and manipulate
- Produce terrain analysis products
- Improve response time for the IPB process
- Co-located with ASAS
- Spts other BEAS via MCS
- Products include:
  - On- and off-road mobility maps
  - Line-of-sight intervisibility maps
  - Concealment maps
  - On-road chokepoint maps
  - Tactical fording/bridging maps
- Tactically mobile:
  - S-280 shelter
  - Std 5-ton truck
- Pre-planned Product Improvements:
  - Supports MCS
  - Supports emerging Army tactical weapon sys
  - Digital data base creation, update and revision functions
  - Electronic interface with Quick Response Multicolor Printer
  - Downsizing for lt div
  - CHS Block II
  - SCT accreditation
  - Multi-spectral imagery exploitation
  - Advanced terrain analysis functions

#### BASIS OF ISSUE:

- 1 per div terrain team
- 2 per EAC/corps terrain team

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## Digital Topographic Support System (DTSS)

The DTSS is being developed to provide Engineer Terrain Teams at Division, corps, and Echelons Above Corps (EAC) automated assistance in the performance of terrain analysis and the production of topographic products within the time frames required by the air-land operations concept. Fielding begins in FY94 with the abilities to receive, reformat, store, retrieve, create, update, and manipulate digital topographic data. Products can be provided to users in both **softcopy** and hardcopy form in significantly reduced time frames compared to the current manual process. Some of the terrain analysis products will include: on- and off-road mobility maps, line-of-sight intervisibility plots, concealment maps, on-road chokepoint maps, and tactical fording/bridging maps.

# IEW SYSTEM FACT SHEETS

## ACRONYM LIST

**ABC:** AirBorne Corps  
**ACE:** Analysis Control Element  
**ACR:** Armored Cavalry Regiment  
**ACT 101:** Advanced Communications Terminal  
**ACUS :** Area Common User System (**MSE** at ECB and TRI-TAC at **EAC**)  
**ADA:** Air Defense Artillery  
**AF:** Air Force  
**AFATDS:** Advanced Field Artillery Targeting Data System  
**AGL:** Above Ground Level  
**ARF:** Airborne Relay Facility  
**ARL:** Airborne Reconnaissance Low  
**ARL-C:** ARL - COMINT  
**ARL-I:** ARL - IMINT  
**ASARS:** Advanced Synthetic Aperture Radar  
**ASAS:** All-Source Analysis System  
**ATCCS:** Army Tactical Command and Control System (name is changing to ABCS: Army Battle Command System)  
**ATR:** Automatic Target Recognition  
**AQF:** Advanced **QUICKFIX**  
**AQL:** **Adanced** QUICKLOOK  
**AUTODIN:** AUTOMatic DIGital Network  
**B2C2:** Brigade and Below Command and Control (name is changing to AB2: ATCCS Brigade and Below)  
**BDA:** Battle Damage Assessment  
**BFA:** Battlefield Functional Area  
**BIT:** Binary **digIT**  
**CARS:** Contingency Airborne Reconnaissance System  
(Ground processing facility of the **AF's** Tactical Reconnaissance System (**TRS**). U-2R is the airborne platform.)  
**c2:** Command and Control  
**C2W:** Command and Control Warfare  
**CEP:** Circular Error of Probability  
**CGS :** Common Ground Station  
**CHAALS:** Communication High Accuracy Airborne Location System

(Acronym List)

**CHS:** Common Hardware/Software  
**CINCSOUTH:** Commander IN Chief, **SOUTHERN** command  
**CMST:** Collection Management Support **Tools**  
**CNR:** Combat Net Radio  
**COMINT:** COMmunications **INTelligence**  
**COMSEC :** COMmunications **SECurity**  
**CONUS:** **CONTinental** United States  
**COTS:** Commercial Off-The-Shelf  
**CPS:** Collection and Processing Subsystem  
**CSP:** Communication Systems Processor  
**CTT-H:** Commander's Tactical Terminal - Hybrid  
**DAMA:** Demand Assigned Multiple Access  
**DB:** Data Base  
**DF:** Direction Finding  
**DFS:** Direction Finding Subsystem  
**DIA:** Defense Intelligence Agency  
**DIN:** **Digital** Network  
**DSNET:** Defense Secure **NETwork** (DSNET 1:**secret**, DSNET 3:**SCI**)  
**DSSCS:** Defense Special Security Communications System  
     (R - denotes the general service **AUTODIN** network;  
     Y - denotes the **SCI** network on the DSSCS)  
**DSVT:** Digital Subscriber Voice Terminal  
**DTSS:** Digital Topographic Support System  
**EA:** Electronic Attack  
**EAC:** Echelons Above Corps  
**EACIC:** Echelons Above Corps Intelligence Center  
**ECB:** Echelons Corps and Below  
**EFVS:** Electronic Fighting Vehicle System  
**ELINT:** **ELectronic INTelligence**  
**EO:** Electra-Optical  
**EP:** Electronic Protection  
**EPDS:** Electronic Processing and Dissemination System  
**ETRAC:** Enhanced Tactical **RA**dar Correlator  
**ETUT:** Enhanced Tactical Users Terminal  
**FAISS:** FORSCOM Automated Intelligence Support System  
**FAST:** Forward Area Support Terminal  
**FDW:** Forward Deployed Workstation  
**FDX:** Full Duplex  
**FLCS:** Force Level Control System  
**FLIR:** Forward Looking Infrared Radar  
**FLOT:** Forward Line Of Troops  
**FLTSATCOM:** **FLeeT SATellite** COMmunications System  
**GBCS:** Ground Based Common Sensor

**Gcs:** Ground Control Station (UAV ground station)  
**GDT:** reference uav  
**GOTS :** Government Off-The-Shelf  
**GPF:** Ground Processing Facility  
**GPS:** Global Positioning System  
**GRCS:** **GuardRail** Common Sensor  
**GSM:** Ground Station Module (ground station for JSTARS)  
**HDX:** Half Duplex  
**HF:** High Frequency (3-30 **MHz**)  
**HL-UAV:** Hand-Launched Unmanned Aerial Vehicle  
**HMMWV:** High Mobility Multi-purpose Wheeled Vehicle  
**HPT:** High Priority Target  
**HVT:** High Value Target  
**HW/SW:** **HardWare/SoftWare**  
**IDL:** Interoperable Data Link (data link between GRCS and IPF)  
**IES:** Imagery Exploitation System  
**IEW:** Intelligence Electronic Warfare  
**IEWCS:** IEW Common Sensor (GBCS and **AQF**)  
**IFR:** Instrument Flight Rules  
**IHFR:** Improved High Frequency Radio  
**IMETS:** Integrated **ME**Teorological System  
**INMARSAT:** International Maritime Satellite Organization  
                   (an international satellite consortium, an INMARSAT-M  
                   terminal stores in a briefcase-size case and provides  
                   4.8 kbps voice and a fax rate of 2400 bps, can be used  
                   for voice, text, and low rate data messages)  
**I/O:** Input/Output  
**IPB:** Intelligence Preparation of the Battlefield  
**IPDS:** -Imagery Processing and Dissemination System  
**IPF:** Integrated Processing Facility (Ground processing station  
           for the **GRCS**)  
**IREMBASS:** Improved Remotely Monitored Battlefield Sensor System  
**JCS:** Joint Chiefs of Staff  
**JDISS:** Joint Defense Intelligence Service System  
**JSTARS :** Joint Surveillance Target Attack Radar System  
**kts:** **Knots**  
**LAN:** Local Area Network  
**LCS:** reference uav  
**LMRDFS:** Lightweight Man-Transportable Radio Direction Finding  
           System (**AN/PRD-12**)  
**LOB:** Line Of Bearing  
**LPI:** Low Probability of Intercept  
**LRT:** reference uav

**MCS :** Manuever Control System  
**MET:** Meteorological  
**MF:** Medium Frequency (300-3,000 kHz)  
**MIES:** Modernized Imagery Exploitation System  
**MIRS:** Miniaturized Imagery Receive System  
**MITT:** Mobile Integrated Tactical Terminal  
**MLRS:** Multiple Launch Rocket System  
**MSE:** Mobile Subscriber Equipment  
**MSL:** Mean Sea Level  
**MSI:** Multi-Spectral Imagery  
**MTI:** Moving Target Indicator  
**NITFS:** National Imagery Transmission Format Standard  
**NM:** Nautical Miles  
**NRT:** Near-Real Time  
**NVIS:** Near-Vertical Incidence Skywave  
**OCONUS:** Outside CONTinental United States  
**OPCON:** Operational CONTROL  
**P3I:** Pre-Planned Product Improvement  
**PSYOPS:** PSYchological OPERations  
**RAM:** Random Access Memory  
**R&D:** Research and Development  
**RMS:** Requirements Management System  
**RORO:** Roll-On Roll-Off  
**RRT:** Radio Receiver/Transmitter  
**RSR:** Radar Service Request  
**RVT:** Remote Video Terminal  
**R/Y:** R is the general service AUTODIN network;  
           Y is the SCI network in the DSSCS  
**SAR:** Synthetic Aperture Radar  
**SATCOM:** SATellite COMMunications  
**SCDL:** Surveillance Control Data Link (data link between the  
           JSTARS aircraft and ground station)  
**SCI:** Sensitive Compartmented Information  
**SHE:** Super High Frequency (3-30 GHz)  
**SICPS:** Standard Integrated Command Post Shelter  
**SID:** Secondary Imagery Dissemination  
**SIGINT:** SIGNALs INTelligence  
**SINGARS:** SINGle Channel Ground Airborne Radio System  
**SOF:** Special Operations Force  
**SOUTHCOM:** SOUTHerN COMmand  
**SPIRIT:** Special Purpose Integrated Remote Intelligence Terminal  
**S&T:** Science and Technology

**SUCCESS:** Synthetic UHF Computer-Controlled Equipment Subsystem

**T1:** A commercial circuit with a transmission rate of  
1.544 **Mbps** (Very simplified definition)

**TADIXS:** **T**actical **D**ata **I**nformation exchange System

Broadcast developed to meet multi-service requirements for direct, guaranteed delivery of minimum-essential battlefield information. The information delivered directly to the commanders will support indications and warning, sensor cueing and user mission planning. Locally controlled filters can be set to tailor the received data to the specific unit's mission based on such parameters as time periods, geographical areas, signals, signal parameters and targets of interest.

**TDA:** Tactical Decision Aids

**TDOA:** Time Difference Of Arrival

**TENCAP:** Tactical Exploitation of National **CAP**abilities

**TE-UAV:** Tactical Endurance - Unmanned Aerial Vehicle

**THMT:** Tactical High Mobility Terminal

**TIBS:** Tactical Information Broadcast Service

The TIBS network provides a capability to disseminate correlated, time-sensitive tactical information to Joint operational users via UHF broadcasts from aircraft or FLTSATCOM. It provides an air picture of fast-moving targets. Current sources of data can include RIVET JOINT, JSTARS, GRCS, AWACS, SENIOR TROUPE, SENIOR SCOUT, etc. The network can broadcast data from up to 10 information producers, each with multiple sensors. TIBS can be tasked or queried by specified users. Reports are broadcast periodically, followed by updates, new data, amplifications or deletions. Users can set filters in the CTT to reduce the volume of messages forwarded to the host workstations.

**TPN:** Tactical Packet Network

**TRAC:** Tactical **RAdar** Correlator

**TRAP:** Tactical Related Applications

A network developed to collect information from multiple sources and disseminate it through a UHF SATCOM broadcast to tactical users. It provides global surveillance information for sensor cueing and integration into data bases at the various field receive locations. Data is forwarded from sensor to processor to communications gateways/relays to one of the FLTSATCOM broadcast satellites for dissemination to worldwide military users. Data is transmitted three times for **99-percent** guaranteed delivery.

TRE: Tactical Receive Equipment

**TRI-TAC:** TRI-service **TACTical** communications system (the Area Common User System (**ACUS**) for **EAC**)

**TRIXS:** Tactical Reconnaissance Intelligence exchange System  
The TRIXS network provides the data structure and direct, dedicated links to disseminate critical, **time-sensitive** tactical reconnaissance, intelligence and surveillance information to batttlefield commanders, via UHF line-of-sight transmissions, from relays aboard military aircraft. The network can support up to five producers and relays, such as, GRCS, CARS, JSTARS, UAV, or EP-3E.

**TROJAN SPIRIT:** TROJAN Special Purpose Integrated Remote Intelligence Terminal

UHF: Ultra-High Frequency (**300-3,000** MHz)

UAV : Unmanned Aerial Vehicle

UAV-CR: Unmanned Aerial Vehicle - Close Range

UAV-E: Unmanned Aerial Vehicle - Endurance

**UAV-SR:** Unmanned Aerial Vehicle - Short Range

ws: Workstation

WARM: **WArtime** Reserve Mode

# IEW SYSTEM FACT SHEETS

## Points of Contact

The IEW System Fact Sheets were produced by the Directorate of Combat Developments, U.S. Army Intelligence Center and Fort Huachuca. Any questions or recommendations regarding edits or updates can be addressed to Concepts Diion, DSN: 879-2257/2258, Commercial: (602)538-2257/2258, Fax extension: -2108. (USAIC&FH, ATTN: ATZS-CDC, FT. Huachuca, AZ 856136000)

System-specific information can be obtained from the appropriate **POCs** listed below.

**TSM GBCS/Ground Systems**  
**ATZS-CDG**  
**DSN: 821-5579/5850**  
**FAX: 821-2534**  
**Commercial: 602-533-xxxx**

**Common Sensor Team**  
**DSN: 821-2429/1760**

**GBCS**  
**AQF**

**Ground Systems Team**  
**DSN: 821-5461/13022**

**AN/PRD 12**  
**E-TRACKWOLF**  
**I-REMBASS**  
**TROJAN SPIRIT II**

**TSM ASAS**  
**ATZS-CDA**  
**DSN: 821-3504/13507**  
**FAX: 8216369**  
**Commerical: 602-533-xxxx**

**ASAS**

**TSM JSTARS**  
**ATZS-CD J**  
**DSN: 821-5301/5201**  
**FAX: 821-5643**  
**Commercial: 602-533-xxxx**

**CTT**  
**GSM BLK I**  
**GSM BLK II**

**TSM UAV/AIR SYSTEMS**  
**ATZS-CDU**  
**DSN: 821-2165/1 804**  
**FAX: 821-I 588**  
**Commerical: 602-533-xxxx**

**Unmanned Systems**  
**DSN: 821-2532/2971**

**UAV-CR**  
**UAV-SR**  
**TE-UAV**  
**POINTER**

**Manned Systems**  
**DSN: 821-2208/2774**

**GRCS**  
**ARL**

**TSM TENCAP**  
**ATZS-CDT-S**  
**DSN: 8214610**  
**Commercial: 602-533-xxxx**

**ETUT**  
**EPDS**  
**ETRAC**  
**FAST**  
**MIES**  
**MIRS**  
**MITT**  
**SUCCESS**

**Integration Division**  
**Weather Team**  
**ATZS-CDI-W**  
**DSN: 879-6472/6647**  
**Commercial: 602-538-xxxx**

**IMETS**  
**AMSS**

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**DTSS**